Listing of Claims:

1. (Previously presented) A catalytic antagonist of a target molecule, said antagonist comprising a targeting moiety that specifically binds to said target molecule said targeting moiety being attached to an enzyme, said enzyme being a subtilisin-type serine hydrolase that degrades said target molecule to reduce binding of the target molecule to its cognate ligand and to said targeting moiety thereby resulting in the release of said antagonist thereby allowing said antagonist to bind and degrade another target molecule.

2. (Original) The antagonist of claim 1, wherein said targeting moiety is joined to said enzyme through the sulfur group on a cysteine.

3. (Original) The antagonist of claim 2, wherein said cysteine is a cysteine that is substituted for a native amino acid other than cysteine in said enzyme.

4. (Original) The antagonist of claim 3, wherein said cysteine is a cysteine that is substituted for a native amino acid other than cysteine in or near a subsite comprising a substrate binding site of said enzyme.

5. (Original) The antagonist of claim 4, wherein said cysteine is a cysteine that is substituted for an amino acid forming a substrate binding site.

6. (Cancelled)

7. (Cancelled)

8. (Previously presented) The antagonist of claim 5, wherein said cysteine is substituted for an amino acid in or near a subsite selected from the group consisting of an S1 subsite, an S1' subsite, and an S2 subsite.

9. (Original) The antagonist of claim 8, wherein said enzyme is a *Bacillus lentus* subtilisin.

10. (Previously presented) The antagonist of claim 8, wherein said cysteine is substituted for an amino acid corresponding to a reference residue in a *Bacillus lentus* subtilisin (SBL), where said reference residue is at or near a residue selected from the

group consisting of residue 156, residue 166, residue 217, residue 222, residue 62, residue 96, residue 104, residue 107, residue 189, and residue 209.

11. – 18. (Cancelled)

12. (Previously presented) The antagonist of claim 1, wherein said target molecule is a molecule present on the surface of a cell.

13. (Original) The antagonist of claim 12, wherein said molecule present on the surface of a cell is a molecule forming a receptor.

14. (Original) The antagonist of claim 12, wherein said molecule present on the surface of a cell is a ligand.

15. (Original) The antagonist of claim 12, wherein said molecule present on the surface of a cell is a component of a cell wall.

16. (Original) The antagonist of claim 12, wherein said molecule present on the surface of a cell is a component of a cell membrane.

17. (Original) The antagonist of claim 1, wherein said targeting moiety is selected from the group consisting of a protein, an antigen , a carbohydrate, a nucleic acid, a lipid, a coordination complex, a sugar, a vitamin, a dendrimer, and a crown ether.

18. (Original) The antagonist of claim 17, wherein said targeting moiety is a cognate ligand for a receptor or an enzyme.

19. (Original) The antagonist of claim 17, wherein said targeting moiety is an inhibitor for a receptor or an enzyme.

20. (Original) The antagonist of claim 1, wherein said enzyme is a protease and said targeting moiety is a ligand selected from the group consisting of a carbohydrate, a vitamin or vitamin analog, an enzyme inhibitor, a peptide, a pharmaceutical that is a small organic molecule, and biotin.

21. (Original) The antagonist of claim 1, wherein said enzyme is a protease and said targeting moiety is a receptor.

22. (Original) The antagonist of claim 20, wherein said enzyme is a subtilisin.

23. (Original) The antagonist of claim 22, wherein said targeting moiety is an enzyme inhibitor that is a pyrazole.

24. (Original) The antagonist of claim 22, wherein said targeting moiety is a biotin.

25. (Original) The antagonist of claim 22, wherein said targeting moiety is a ligand that binds a lectin.

26. (Original) The antagonist of claim 25, wherein said lectin is concanavalin A.

27. (Previously presented) The antagonist of claim 26, wherein said targeting moiety is a carbohydrate.

28. (Previously presented) The antagonist of claim 27, wherein said targeting moiety is thioethyl D-mannopyranoside.

29. (Original) The antagonist of claim 26, wherein said targeting moiety specifically binds to a soil and said enzyme degrades a component of said soil.

30. (Withdrawn) A method of degrading a target molecule, said method comprising contacting said target molecule with a catalytic antagonist comprising a targeting moiety that specifically binds to said target molecule said targeting moiety being attached to an enzyme, said enzyme being a subtilisin-type serine hydrolase that degrades said target molecule resulting in the release of said antagonist thereby allowing said antagonist to bind and degrade another target molecule.

31. (Withdrawn) The method of claim 30, wherein said targeting moiety is joined to said enzyme through the sulfur group on a cysteine.

32. (Withdrawn) The method of claim 31, wherein said cysteine is a cysteine that is substituted for a native amino acid other than cysteine in said enzyme.

33. (Withdrawn) The method of claim 32, wherein said cysteine is a cysteine that is substituted for a native amino acid other than cysteine in or near a subsite comprising a substrate binding site of said enzyme.

34.-43. (Cancelled)

35. (Withdrawn) The method of claim 32, wherein said cysteine is a cysteine that is substituted for an amino acid forming a substrate binding site.

36. (Withdrawn) The method of claim 35, wherein said cysteine is substituted for an amino acid in or near a subsite selected from the group consisting of an S1 subsite, an S1' subsite, and an S2 subsite.

37. (Withdrawn) The method of claim 36, wherein said enzyme is a *Bacillus lentus* subtilisin.

38. (Withdrawn) The method of claim 36, wherein said cysteine is substituted for an amino acid corresponding to a reference residue in a *Bacillus lentus* subtilisin, where said reference residue is at or near a residue selected from the group consisting of residue 156, residue 166, residue 217, residue 222, residue 62, residue 96, residue 104, residue 107, residue 189, and residue 209.

39.-55. (Cancelled)

40. (Withdrawn) The method of claim 30, wherein said target is a molecule present on the surface of a cell.

41. (Withdrawn) The method of claim 40, wherein said molecule present on the surface of a cell is a molecule forming a receptor.

42. (Withdrawn) The method of claim 40, wherein said molecule present on the surface of a cell is a ligand.

43. (Withdrawn) The method of claim 40, wherein said molecule present on the surface of a cell is a component of a cell wall.

44. (Withdrawn) The method of claim 40, wherein said molecule present on the surface of a cell is a component of a cell membrane.

45. (Withdrawn) The method of claim 30, wherein said targeting moiety is selected from the group consisting of a protein, an antigen, a carbohydrate, a nucleic acid, a lipid, a coordination complex, a sugar, a vitamin, a dendrimer, and a crown ether.

46. (Withdrawn) The method of claim 45, wherein said targeting moiety is a cognate ligand for a receptor or an enzyme.

47. (Withdrawn) The method of claim 45, wherein said targeting moiety is an inhibitor for a receptor or an enzyme.

48. (Withdrawn) The method of claim 30, wherein said enzyme is a protease and said targeting moiety is a ligand selected from the group consisting of a carbohydrate, a vitamin or vitamin analog, an enzyme inhibitor, a peptide, a pharmaceutical that is a small organic molecule, and biotin.

49. (Withdrawn) The antagonist of claim 30, wherein said enzyme is a protease and said targeting moiety is a receptor.

50. (Withdrawn) The method of claim 48, wherein said enzyme is a subtilisin.

51. (Withdrawn) The method of claim 50, wherein said targeting moiety is an enzyme inhibitor that is a pyrazole.

52. (Withdrawn) The method of claim 50, wherein said targeting moiety is a biotin.

53. (Withdrawn) The method of claim 50, wherein said targeting moiety is a ligand that binds a lectin.

54. (Withdrawn) The method of claim 53, wherein said lectin is concanavalin A.

55. (Withdrawn) The method of claim 54, wherein targeting moiety is a carbohydrate.

56. (Withdrawn) The method of claim 54, wherein said targeting moiety is thioethyl D-mannopyranoside.

57. (Withdrawn) The method of claim 50, wherein said targeting moiety specifically binds to a soil and said enzyme degrades a component of said soil.

58.-145. (Cancelled)